MEDISANA®

DE Blutdruck-Messgerät HGN

GB Blood pressure measuring device HGN

FR **Tensiomètre HGN**
IT **Sfigmomanometro HGN**
ES **Esfigmomanómetro HGN**
PT **Medidor da tensão arterial HGN**
NL **Bloeddrukmeter HGN**
FI **Olkavarren verenpainemittari HGN**
SE **Blodtrycksmätare HGN**
GR **Πιεσόμετρο αίματος HGN**

Art. 51067

CE 0297

Gebrauchsanweisung	*Bitte sorgfältig lesen!*
Instruction Manual	*Please read carefully!*
Mode d'emploi	*A lire attentivement s.v.p.!*
Istruzioni per l'uso	*Da leggere con attenzione!*
Instrucciones de manejo	*¡Por favor lea con cuidado!*
Manual de instruções	*Por favor ler cuidadosamente!*
Gebruiksaanwijzing	*A.u.b. zorgvuldig lezen!*
Käyttöohje	*Lue huolellisesti läpi!*
Bruksanvisning	*Läses noga!*
Οδηγίες χρήσης	*Παρακαλούμε διαβάστε προσεκτικά*

Arrhythmie-Erkennung
Arrhythmia detection

entspricht den Anforderungen
MDD 93/42
Medical Device Directive

klinisch geprüft
clinically tested

GARANTIE
3
YEARS
WARRANTY

CERTIFIED
QUALITY

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Gerät und Bedienelemente
Device and controls
Appareil et éléments de commande
Apparecchio ed elementi per la regolazione
Dispositivo y elementos de control
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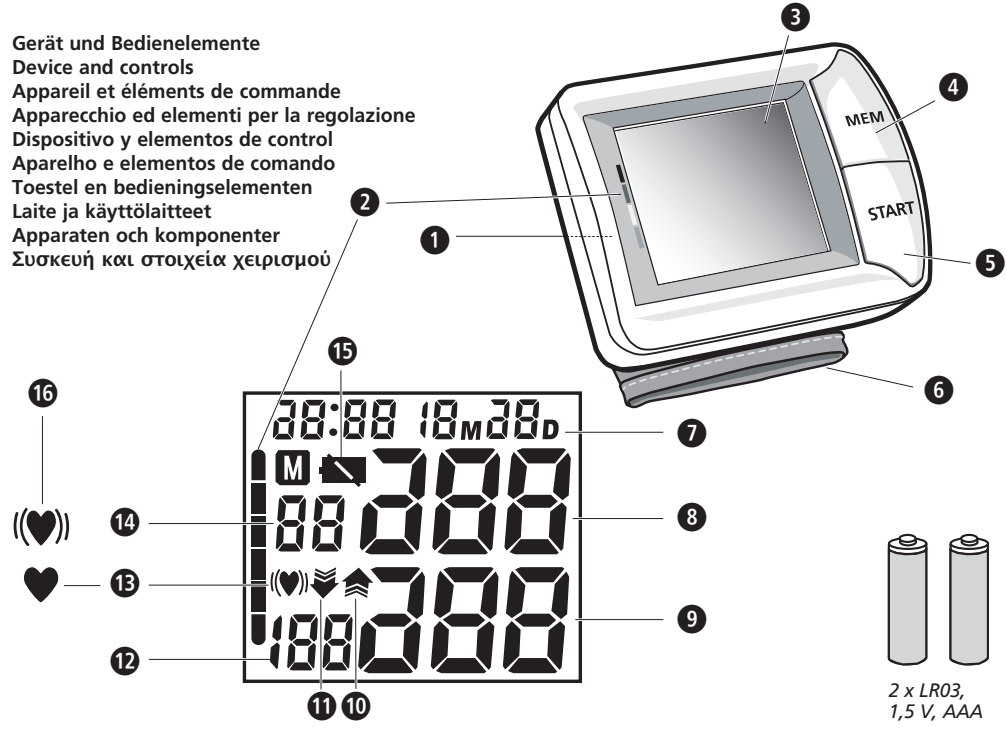
Toestel en bedieningselementen
Laite ja käyttölaitteet
Apparaten och komponenter
Συσκευή και στοιχεία χειρισμού



2 x LR03,
1,5 V, AAA

DE

1. Batteriefach
2. Blutdruck-Indikator (grün - gelb - orange - rot)
3. LCD-Anzeige (Display)
4. MEM-Taste (Speicherabruf)
5. START-Taste
6. Handgelenk-Manschette
7. Anzeige von Datum/Uhrzeit
8. Anzeige des Systolischen Drucks
9. Anzeige des Diastolischen Drucks
10. Aufpump-Symbol
11. Luftablass-Symbol
12. Anzeige der Pulsfrequenz
13. Puls-Symbol
14. Speicherplatz-Nummer
15. Batteriewechsel-Symbol
16. Gerät hat Arrhythmie festgestellt

GB

1. Battery Compartment
2. Blood Pressure Indicator (green - yellow - orange - red)
3. LCD screen (display)
4. MEM button (Memory Recall)
5. START button
6. Wrist cuff
7. Display of Date/Time
8. Display of Systolic Pressure
9. Display of Diastolic Pressure
10. Inflate to Measure symbol
11. Deflate to Measure symbol
12. Display of Pulse Rate
13. Pulse symbol
14. Memory Location number
15. Change Battery symbol
16. Unit has detected an arrhythmia

FR

1. Compartiment à piles
2. Indicateur de tension (vert – jaune – orange – rouge)
3. Affichage LCD (écran)
4. Touche MEM (mémoire)
5. Touche START
6. Manchette pour poignet
7. Affichage de la date / l' heure
8. Affichage de la pression systolique
9. Affichage de la pression diastolique
10. Symbole de gonflage
11. Symbole de dégonflage
12. Affichage du pouls
13. Symbole du pouls
14. Numéro de l'emplacement de mémoire
15. Symbole de changement des piles
16. L'appareil a constaté une arythmie

IMPORTANT INFORMATION! RETAIN FOR FUTURE USE!

Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use. Should you give this device to another person, it is vital that you also pass on this instruction manual.

Explanation of symbols

This instruction manual belongs to this device.
It contains important information about starting up and operation. Read the instruction manual thoroughly. Non-observance of these instructions can result in serious injury or damage to the device.

WARNING
These warning notes must be observed to prevent any injury to the user.

CAUTION
These notes must be observed to prevent any damage to the device.

NOTE
These notes give you useful additional information on the installation or operation.

Classification: IIa, Type B applied part

Lot number

Manufacturer

Date of manufacture

Safety Information

WARNING

Do not take any therapeutic measures based on your own measurements! Never change the quantity of medication prescribed by your doctor!

1.1 Tips for your well being

- Irregularity of pulse or arrhythmia can lead to difficulties in recording a correct reading when measurements are taken using oscillometric blood pressure devices.
- If you should suffer from conditions such as arterial occlusive disease, please consult your doctor before using the unit.
- The unit may not be used to check the heart rate of patients with a pacemaker.
- Pregnant patients should take their own personal state of health into consideration and take all necessary precautions before using the unit. If in doubt, consult your doctor.

- Please take the following measures if anything untoward should happen such as pain in the wrist or other discomfort: Press the **START** button ❺ to deflate the cuff immediately. Loosen the cuff and remove it from your wrist. Please contact either your dealer or **MEDISANA** directly.
- Patients with a weak pulse wave should raise their arm and open and close their hand around 10 times before taking a reading. This exercise optimizes the pulse wave and the measuring process.

1.2 Important considerations

- The unit is only to be used for the specific purpose described in these instruction manual.
- Any misuse will void the warranty.
- The unit is intended for domestic use only.
- On the rare occasion of a fault causing the cuff to remain fully inflated during measurement, open the cuff immediately.
- Do not use the unit near to equipment emitting a strong electric or magnetic field, such as radios. This may impair the correct functioning of the unit.
- This device is not designed to be used by persons (including children) with limited physical, sensory or mental abilities, or by persons with insufficient experience and/or knowledge, unless under observation by a person responsible for their safety, or unless they have been instructed in the use of the device.
- Children must be supervised to ensure that they do not play with the device.
- If a fault occurs, do not try to repair the unit yourself. Attempts to do so will void the warranty. Refer all servicing to authorized service personnel.
- Protect the unit from moisture. Should moisture enter the unit, remove the batteries and stop using it immediately. In this case, please contact either your dealer or **MEDISANA** directly.

Thank you Very much

Thank you for your confidence in us and congratulations on your purchase!
With the **HGN** upper arm blood pressure monitor you have purchased a **MEDISANA** quality product.
To ensure the best results and long-term satisfaction with your **MEDISANA HGN** blood pressure monitor, we recommend that you read the following operating and maintenance instructions carefully.

2.1 Items supplied and packaging

Please check first of all that the device is complete and is not damaged in any way. In case of doubt, do not use it and contact your supplier or your service centre.
The following parts are included:

- 1 **MEDISANA** Blood pressure monitor **HGN**
- 2 Batteries (Typ AAA, LR03) 1,5V
- 1 Storage box
- 1 Instruction manual

The packaging can be reused or recycled. Please dispose properly of any packaging material no longer required. If you notice any transport damage during unpacking, please contact your supplier without delay.

WARNING

Please ensure that the polythene packing is kept away from the reach of children! Risk of suffocation!

2.2 What is blood pressure?

Blood pressure is the pressure created in the blood vessels by each heart beat. When the heart contracts (= systole) and pumps blood into the arteries, it brings about a rise in pressure. The highest value is known as the systolic pressure and is the first value to be measured. When the cardiac muscle relaxes to take in fresh blood, the pressure in the arteries also falls. Once the arteries are relaxed, a second reading is taken – the diastolic pressure.

2.3 How is blood pressure measured?

The **HGN** is a blood pressure unit intended for measuring blood pressure on the wrist. The measurement is carried out by a microprocessor, which, via a pressure sensor, measures the vibrations resulting from the inflation and deflation of the cuff over the artery.

2.4 Why should you take your blood pressure at home?

MEDISANA has had many years of experience in the field of blood pressure measurement. The high precision of **MEDISANA** devices has been confirmed by extensive clinical tests, carried out according to strict international standards. One strong argument in favour of taking blood pressure at home is the fact that the readings are taken in familiar surroundings under relaxed conditions. The most important reading is the socalled „baseline value", the one taken before breakfast, directly after getting up in the morning. As far as it is possible, you should always try to take your blood pressure at the same time and under the same conditions each day.
This ensures comparable results and helps in detecting the first signs of high blood pressure. If high blood pressure remains undetected, it increases the risk of further cardiovascular diseases.

THEREFORE WE RECOMMEND:

Take a blood pressure reading daily and on a regular basis, even if you are experiencing no apparent complaints.

2.5 Blood pressure classification

The following table shows the classification of high and low blood pressure, without taking age into consideration. This blood pressure assessment scale corresponds to the guidelines of the World Health Organisation (WHO).

Low blood pressure	***Normal blood pressure (green** display area ❷)*
systolic below <100	systolic 100 – 139
diastolic below <60	diastolic 60 – 89

Types of high blood pressure

***mild hypertension (yellow** display area ❷)*	***midium hypertension (orange** display area ❷)*	***serious hypertension (red** display area ❷)*
systolic 140 – 159	systolic 160 – 179	systolic ≥ 180
diastolic 90 – 99	diastolic 100 – 109	diastolic ≥ 110

WARNING

Blood pressure that is too low represents just as great a health risk as blood pressure that is too high! Fits of dizziness may lead to dangerous situations arising (e.g. on stairs or in traffic)!

2.6 Fluctuations in blood pressure

There are many factors that can influence blood pressure. Readings can be affected seriously by stress, fear, heavy physical exertion or the time of day at which the measurements are taken. Your personal blood pressure values are subject to considerable fluctuation during the course of the day and the year. These fluctuations are particularly pronounced in the case of patients suffering from hypertension. Blood pressure is usually at its highest during physical exertion and at its lowest at night when you are asleep.

2.7 Influencing and evaluating readings

- Measure your blood pressure several times, then record and compare the results. Do not draw any conclusions from a single reading.
- Your blood pressure readings should always be evaluated by a doctor who is also familiar with your personal medical history. When using the unit regularly and recording the values for your doctor, you should visit the doctor from time to time to keep him updated.
- When taking readings, remember that the daily values are influenced by several factors. Smoking, consumption of alcohol, drugs and physical exertion influence the measured values in various ways.
- Measure your blood pressure before meals.
- Before taking readings, allow yourself at least five minutes rest.
- If the systolic and diastolic readings seem unusual (too high or too low) on several occasions, despite correct use of the unit, please inform your doctor. This also applies to the rare occasions when an irregular or very weak pulse prevents you from taking readings.

3.1 Insert / replace batteries

You must insert the batteries provided before you can use your unit. The lid of the battery compartment ❶ is located on the underside of the unit. Open it, remove it and insert the 2 AAA LR03 type 1.5 V batteries supplied. Ensure correct polarity when inserting the batteries (as marked inside the battery compartment). Close the battery compartment. Replace the batteries if the change battery symbol ⓯ appears on the display ❸ or if nothing appears on the display after the unit has been switched on.

WARNING
BATTERY SAFETY INFORMATION

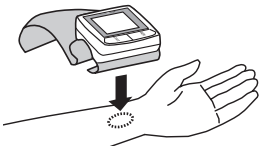
- **Do not disassemble batteries!**
- **Remove discharged batteries from the device immediately!**
- **Increased risk of leakage, avoid contact with skin, eyes and mucous membranes! If battery acid comes in contact with any of these parts, rinse the affected area with copious amounts of fresh water and seek medical attention immediately!**
- **If a battery has been swallowed seek medical attention immediately!**
- **Replace all of the batteries simultaneously!**
- **Only replace with batteries of the same type, never use different types of batteries together or used batteries with new ones!**
- **Insert the batteries correctly, observing the polarity!**
- **Remove the batteries from the device if it is not going to be used for an extended period!**
- **Keep batteries out of children's reach!**
- **Do not attempt to recharge these batteries! There is a danger of explosion!**
- **Do not short circuit! There is a danger of explosion!**
- **Do not throw into a fire! There is a danger of explosion!**
- **Do not throw used batteries into the household refuse; put them in a hazardous waste container or take them to a battery collection point, at the shop where they were purchased!**

3.2 Setting date and time

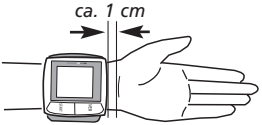
1. With the unit switched off, simultaneously press the **START** button ❺ and the **MEM** button ❹ to set the date and time. First of all the entry point for the month flashes (1, 2, 3... 12).
2. Press the **MEM** button ❹ repeatedly until the desired number for the month appears.
3. Press the **START** button ❺ again to accept the setting. Now the entry point for the date flashes.
4. Proceed in exactly the same manner as described in point 2 when entering the date, hours and minutes.
5. In each case, press the **MEM** button ❹ to select and the **START** button ❺ to accept the entry.
6. The date and time are displayed continuously. If the batteries are changed the information is lost and the date and time must be set again.

4.1 Fitting the cuff

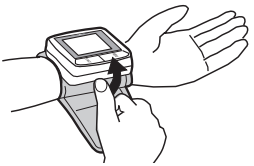
1. Attach the clean cuff to the left wrist which is free from clothing with the palm of the hand facing upwards.



2. There should be a gap of approx. 1 cm between the cuff and the palm of the hand.

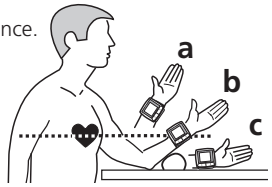


3. Press the Velcro tape firmly around the wrist ensuring that it is not so tight that it could falsify the measured result.



4.2 Correct position for taking readings

- Carry out the measurement whilst seated.
- Relax your arm and place it comfortably, on a table for instance.
- Raise the wrist so that the cuff of the monitor is at heart level (position **a** = too high, **b** = correct, **c** = too low).
- Keep still during the measurement: not move and do not talk as this may alter the measurements.



4.3 Taking blood pressure readings

1. Switch the unit on by pressing the **START** button ❺.
2. If the **START** button ❺ is pressed, a long beep is heard and all display characters are shown (display test). Following this the memory currently set (***U1*** or ***U1***) is displayed. Press the **MEM** button ❹ to change over to the other memory. Confirm your selection by pressing the **START** button ❺. The display shows the values from the previous measurement. If no measurement has been taken, zeroes will appear next to the date and time.
3. The unit is ready for measurement, the number ***0*** is displayed.
4. Following this the unit inflates the cuff until sufficient pressure has built up for a measurement. Then the unit slowly releases air from the cuff and carries out the measurement.
5. When the measurement is finished, the cuff is deflated completely. The systolic and diastolic blood pressure and the pulse value with the pulse symbol ⓭ appear on the display ❸ . The blood pressure indicator ❷ flashes next to the relevant coloured bar depending on the WHO blood pressure classification (see page 24). If the unit has detected an irregular heartbeat, the arrhythmia display ⓰ also flashes.
6. The measured values are stored automatically. A total of up to 120 measured values with time and date can be stored in two memories (***U1*** and ***U2***).

4.4 Switching off the unit

The unit has an automatic switch-off function. The unit switches off automatically after a minute if no buttons are pressed.
The unit may also be switched off using the **START** button ❺.
The time and the date are constantly shown in the display.

5.1 Displaying stored results

Up to 60 measurements (blood pressure and pulse with time and date) may be stored in each of the blood pressure monitor's two memories. The measured values are stored automatically. Press the **MEM** button ❹ to call up the measured values stored. The unit displays the memory set (***U1*** or ***U2***). Pressing the **START** button ❺ switches to the other memory. The values of the most recently saved measurement (memory location number e.g. "***01***") including the flashing blood pressure indicator are displayed after pressing the **MEM** button ❹.
Repeatedly pressing the **MEM** button ❹ displays the respective values measured previously. In memory recall mode the unit switches off automatically after approximately 120 seconds if the last entry has been reached and the **MEM** button ❹ has been pressed once more. Memory recall mode can be exited at any time by pressing the **START** button ❺, which will also switch the unit off.
If all 60 memory locations in a memory are occupied, a new measured value is saved whilst the oldest value is deleted.

5.2 Deleting memory

If you are in memory recall mode, press and hold the **MEM** button ❹ for approximately 8 seconds. All measured data stored will be deleted automatically after three beeps. Only noughts will be shown on the display instead of the measured values.

6.1 Troubleshooting

The battery change symbol appears in the display

- The batteries are too low or empty. Replace both batteries with new 1.5 V AAA LRO3 batteries.

Erratic measurements being displayed

- Cuff incorrectly fitted or not tight enough. Fit cuff correctly and tighten.
- You have changed position or the cuff has moved during the measurement. Keep still and do not move your arm or the cuff.
- You have an irregular heartbeat. Even if your heartbeat is only slightly irregular, repeat the measurement. The unit is not suitable for people with an extremely irregular heartbeat.
- You have spoken during the measurement, you are nervous or you are excited. Do not speak and breathe deeply two or three times in order to relax.
- You are not in the corrected seated position. Please assume the correct position when taking the measurement.
- A problem occurred during inflation or during the measurement. Repeat the measurement.

"EE" appears in the display

- The unit has not been inflated enough. Repeat the measurement
- A problem occurred during inflation or during the measurement. Repeat the measurement.

No display or display locked

- No batteries have been inserted, batteries wrongly inserted or batteries are completely empty. Insert batteries, check battery position or replace with new batteries.
- A malfunction or fault has occurred. Briefly remove the batteries and then replace them.

Please contact the service centre if the error message appears again when the measurement is repeated.

6.2 Cleaning and maintenance

- Remove the batteries before cleaning the unit.
- Never use strong detergents or hard brushes.
- Clean the unit using a soft cloth lightly moistened with a mild soapy solution. Never use abrasive cleaning agents or alcohol.
- Do not allow any water to get into the unit. Do not use the unit again until it is completely dry.
- Remove the batteries from the unit if you do not wish to use it for an extended period of time, otherwise there is a risk of battery leakage.
- Do not expose the unit to direct sunlight, and protect it from dust and moisture.
- Only inflate the cuff when it is in position around the wrist.
- The unit is best kept in the storage box included in your purchase and should preferably be stored in a clean dry place.
- *Servicing and calibration (applies to commercial use):*
  The unit has been calibrated by the manufacturer for a period of two years' use. **In the case of commercial use**, the unit must be serviced and recalibrated at least once every two years. This calibration will be charged for andcan be carried out by an appropriate authority or an authorised service centre - in accordance with the regulations for users of medical equipment.

6.3 Disposal

This product must not be disposed of together with domestic waste.
All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner.
Please remove the battery before disposing of the device/unit. Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop.
Consult your local authority or your supplier for information about disposal.

6.4 Directives / Norms

This blood pressure monitor meets the requirements of the EU standard for non-invasive blood pressure monitors. It is certified in accordance with EC Guidelines and carries the CE symbol (conformity symbol) "CE 0297".
The blood pressure monitor corresponds to European standards EN 1060-1 and EN 1060-3.
The specifications of EU Guideline "93/42/EEC of the Council Directive dated 14 June 1993 concerning medical devices" are met.

Electromagnetic compatibility:

The device complies with the EN 60601-1-2 standard for electromagnetic compatibility.
Inquire at **MEDISANA** for details on this measurement data.

Intended use:

This unit is suitable for non-invasive blood pressure measurement in adults (i.e., suitable for external use).

6.5 Technical specifications

Name and model	:	**MEDISANA** blood pressure monitor **HGN**
Display system	:	Digital display
Memory slots	:	2 x 60
Measuring technique	:	Oscillometric
Power supply	:	3 V⎓ , 2 x 1,5 V Batteries AAA LRO3
Blood pressure measuring range	:	0 – 300 mmHg

Pulse measuring range	:	30 – 180 beats / Min.
Maximum error tolerance for static pressure	:	± 3 mmHg
Maximum error tolerance for pulse rate	:	± 5 % of the reading
Pressure generation	:	Automatic, using pump
Deflation	:	Automatic
Automatic switch-off	:	After approx. 1 minute
Operating conditions	:	+ 5 °C to + 40 °C, < 85 % max. relative humidity
Storage conditions	:	– 20 °C to + 55 °C < 95 % max. relative humidity
Dimensions	:	approx. 85 mm x 64 mm x 30 mm
Cuff size	:	approx. 300 x 70 mm circumference 14 – 19,5 cm for adults
Weight	:	approx. 147 g without batteries
Item number	:	51067
EAN number	:	40 15588 51067 0

CE 0297

In accordance with our policy of continual product improvement, we reserve the right to make technical and optical changes without notice.

Warranty and repair terms

Please contact your supplier or the service centre in case of a claim under the warranty. If you have to return the unit, please enclose a copy of your receipt and state what the defect is.

The following warranty terms apply:

1. The warranty period for **MEDISANA** products is three years from date of purchase. In case of a warranty claim, the date of purchase has to be proven by means of the sales receipt or invoice.
2. Defects in material or workmanship will be removed free of charge within the warranty period.

3. Repairs under warranty do not extend the warranty period either for theunit or for the replacement parts.

4. The following is excluded under the warranty:

- **a.** All damage which has arisen due to improper treatment, e.g. nonobservance of the user instructions.
- **b.** All damage which is due to repairs or tampering by the customer or unauthorised third parties.
- **c.** Damage which has arisen during transport from the manufacturer to the consumer or during transport to the service centre.
- **d.** Accessories which are subject to normal wear and tear (cuff, batteries etc.).

5. Liability for direct or indirect consequential losses caused by the unit are excluded even if the damage to the unit is accepted as a warranty claim.

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Internet: www.medisana.de

The service centre address is shown on the attached leaflet.